

ABSTRACT OF THE INVENTION

A dry powder inhaler has a dispersion chamber containing beads. A dose of dry powder is released into the chamber, or into an inlet tangentially joining into the chamber. As the patient inhales on a nosepiece or mouthpiece, air moves circularly through the dispersion chamber to drive the beads. The beads roll, bounce, and collide repeatedly with the drug particles on the chamber surfaces or on the beads. The smaller active drug particles are separated from larger carrier particles and from each other, and a powder aerosol is created and inhaled by the patient. The beads are preferably lightweight, so that they can be rapidly accelerated and moved, even with nominal inspiration. The flow resistance of the inhaler is also reduced via the beads, allowing greater airflow and powder dispersion, without any increased effort by the patient.